

THE MARYLAND-NATIONAL CAPITAL  
PARK AND PLANNING COMMISSION

PRINCE GEORGE'S COUNTY PLANNING BOARD

STAFF REPORT

SUBJECT: Preliminary Subdivision Plat 4-00058  
Earnshaw Estates, Lots 1 - 51

OVERVIEW

The subject property consists of approximately 31.03 acres of land in the R-R Zone. It is currently identified as Parcel 65, Tax Map 134, Grid F-2. A portion of the property has been farmed, but the majority is densely wooded. The applicant proposes to develop the property as a residential subdivision with 51 single-family detached residences.

Access is provided via a public street connection at the terminus of Elmwood Drive through the existing Clinton Acres subdivision. Clinton Acres is a residential subdivision in the R-R-Zone. Staff recommends a second access point be provided to connect to a planned connector that will ultimately provide additional access to Branch Avenue. A discussion of this issue is found in Finding 7 of this report.

The proposed subdivision employs two alternative development techniques, Lot Size Averaging and Flag Lots. Both are permitted, given certain findings. Typically, in the R-R Zone, the minimum lot size is 20,000 square feet. The Lot Size Averaging technique allows up to 50 percent of the proposed lots to be reduced to no less than 15,000 square feet upon certain findings. A discussion of the Lot Size Averaging technique employed by the applicant is found in Finding 2.

The proposal also includes a Flag Lot. As the name suggests, flag lots are lots that look like a flag on a pole. The minimum street frontage in the R-R Zone is 60 feet on a cul-de-sac. In this case, one lot at the end of a cul-de-sac has a frontage of 25 feet, with a stem leading back to the buildable portion of the lot. This arrangement is permitted given the discussion in Finding 3 of this report.

SETTING

The property is located east of MD 5 between Earnshaw Drive and Moores Road at the end of Elmwood Drive. It is surrounded by land in the R-R Zone. To the north is farmland; to the northeast is the Clinton Acres subdivision of single-family detached homes; to the south east is undeveloped land; to the west is one single-family home on a large farm.

FINDINGS AND REASONS FOR STAFF RECOMMENDATION

1. Environmental Issues and Variation Request - A Forest Stand Delineation (FSD) has been submitted and reviewed in conjunction with this application for Preliminary Plat of Subdivision. The Detailed FSD has been found to meet the requirements for a Forest Stand Delineation. The Type I Tree Conservation Plan (TCP I/41/00) as revised on December 20, 2000 has been

reviewed and found to satisfy the requirements of the Prince George's County Woodland Conservation Ordinance. This 31.03 acre property in the R-R zone has a net tract area of 29.25 acres. The 10.57 acres woodland conservation requirement for this property includes the 20 percent Woodland Conservation Threshold of 5.85 acres and replacement requirements of 4.72 acres due to proposed woodland clearing. This 10.57 acre requirement is being satisfied by 4.14 acres of on-site preservation in priority retention areas, 4.28 acres of on-site reforestation and 2.15 acres of off-site mitigation. TCP I/41/00 is recommended for approval subject to the conditions addressed later in this memorandum.

A stream, 100-year floodplain, and possibly wetlands exist along the eastern property line. The plans as submitted reflect the location of the stream and the 100-year floodplain. Staff evaluated where the 50-foot stream buffer would be located and determined that it is entirely within the limits of the 100-year floodplain. Based on a field visit, staff has concluded that wetlands on the site are located within the 100-year floodplain and/or the proposed tree save area as identified on TCP I/41/00.

Section 24-130 of the Subdivision Ordinance requires that the stream, stream buffer, 100-year floodplain, wetlands, and 25-foot wetland buffer be protected during the development of a property. This Preliminary Plat of Subdivision proposes impacts to each of these features. The impacts are associated with the Elmwood Drive road crossing and the proposed sewer outfall to the north of the road crossing. The applicant submitted a variation request dated October 16, 2000 that has been evaluated with respect to the required findings in Section 24-113(a) of the Subdivision Ordinance as follows:

- a. **The granting of the variation will not be detrimental to the public safety, health, or welfare, or injurious to other property.** The proposed connection of proposed Elmwood Drive to existing Elmwood Drive and the proposed sewer outfall will not be detrimental to the public safety, health, or welfare, or injurious to other property. The road design and construction will be required to mitigate for storm events to ensure that the 100-year floodplain elevation is not increased.
- b. **The conditions on which the variation is based are unique to the property for which the variation is sought and are not applicable generally to other properties.** The conditions on which the variation are based are unique to the subject property. The access to the property for this development is by the proposed connection to existing Elmwood Drive which is located on the opposite side of the stream and 100-year floodplain from the proposed subdivision. Elmwood Drive as proposed will serve as the sole access to the property.
- c. **The variation does not constitute a violation of any other applicable law, ordinance, or regulation.** The limited disturbances proposed herein, for which the variations are requested, are not at odds with any other applicable law, ordinance, or regulation.
- d. **Because of the particular physical surroundings, shape, topographical conditions of the specific property involved, a particular hardship to the owner would result, as distinguished from a mere inconvenience, if the strict letter of these regulations is carried out.** If this variation is denied, there would

be insufficient site access and development of this site could not proceed to the fullest extent allowable by law. The proposed impacts have been limited to that necessary for the construction of Elmwood Drive and a sewer outfall structure.

The soils found on this property include Fallsington sandy loam, Sassafras gravelly loam, and Sassafras sandy gravelly loam. The Fallsington soils which are located near the stream have limitations with respect to flood hazard, impeded drainage and high water tables. The Sassafras soils have no significant limits with respect to development.

No adverse noise impacts have been found on or adjacent to the subject property. Although the property is located near the flight path for Andrews Air Force Base the 1998 ■Air Installation Compatible Use Zone (AICUZ) Study• does not show this property to be within any of the defined Accident Potential Zones (APZ) or within a noise exposure zone that exceeds 65 dBA. The property is located approximately 1,100 feet southwest of the southern limit of the 65 dBA noise contour as reflected in the AICUZ Study.

Based on information provided by the Maryland Department of Natural Resources Natural Heritage Program, there are no rare, threatened or endangered species found in the vicinity of this property.

There are no other significant environmental issues at this time. An evaluation of the vicinity reveals no scenic roads or historic roads on or adjacent to this property

The property is in Water and Sewer Category 4 and will be served by public systems. A change to Category 3 will be necessary prior to approval of the final plat.

2. Lot Size Averaging - The plan proposes the use of Lot Size Averaging, a development technique permitted by the Zoning Ordinance under certain circumstances. In this case, the applicant proposes larger lots around the periphery of the property with smaller lots in the interior. The unique environmental features on this property and the location of stands of trees, including specimen trees, make this site a prime candidate for the use of the Lot Size Averaging technique.

24-121(a)(12) requires that the Planning Board make the following findings in permitting the use of lot size averaging:

- A. **The subdivision design provides for better access, protects or enhances historic resource or natural features and amenities, or otherwise provides for a better environment than that which could be achieved by the exclusive use of standard lots.** On this property, the internal circulation patterns are dictated by the significant environmental features. A conventional lotting pattern with typical rectangular lots of 20,000 square feet would not be appropriate on this property in that it would require significant amounts of disturbance. The use of lot size averaging allows smaller lots to be concentrated in the interior of the property while larger lots are located along the perimeter. The larger lots back to a large floodplain area and to lots in adjoining properties. In the justification statement dated October 16, 2000, the applicant argues that ■he variation in lot size allows the applicant to better fit the proposed lots within the existing

topography. Staff concurs with this analysis. Lot Size Averaging allows the property to be developed at a density consistent with master plan recommendations and preserve the natural terrain to the greatest extent possible.

- B. The subdivision design provides for an adequate transition between the proposed lot sizes and locations of lots and the lots, or lot size standards, of any adjacent residentially zoned parcels.** The property abuts environmentally sensitive land and other R-R Zoned residential lots. The subdivision has been designed to maximize lot size where lots abut these adjoining properties, providing an adequate transition from the smaller lots in the interior of the subdivision.
- C. The subdivision design, where applicable, provides for an adequate transition between the proposed natural features of the site and any natural features of adjacent parcels.** As previously stated, lots along the edge of the subdivision are larger than those in the interior, with larger lots abutting the floodplain area. These lots provide tree conservation areas as a buffer and transition from the lots to the adjoining wetlands and floodplain.

In addition, Section 27-423 of the Prince George's County Zoning Ordinance sets the zoning requirements for lot size averaging. Specifically, in the R-R Zone

- A. The maximum number of lots permitted is equal to the gross acreage divided by the largest minimum lot size in the zone (20,000 square feet).** In this case, with 31.03 acres and a minimum lot size of 20,000 square feet, the maximum number of lots allowed is 62. The applicant proposes 51 lots.
  - B. At least 50 percent of the lots created shall equal or exceed the largest minimum lot size in the zone (20,000 square feet).** As proposed, 26 of the proposed 51 lots exceed 20,000 square feet. Therefore the proposed subdivision meets the minimum zoning ordinance standards for lot size averaging. Staff recommends a reduction of 3 lots for reasons listed in other sections of this report; based on the staff recommendation, ultimately 26 lots will exceed 20,000 square feet and 23 will be between 15,000 and 20,000 square feet
3. Flag Lot - The proposal includes one flag lot. Proposed Lot 47 has 25 feet of frontage on Elmwood Place, with a stem leading to a large lot area. Staff supports the use of this flag lot; it satisfies minimum requirements and creates a nice, secluded lot that will overlook the stormwater management pond.

Flag lots are permitted pursuant to Section 24-138.01 of the Subdivision Regulations. The proposed flag lot satisfies all standards of Section 24-138.01(d).

- A.** A maximum of two tiers is permitted. The proposed flag lot represents the second tier.
- B.** The flag stem is a minimum width of 25 feet for the entire length of the stem.

- C. At 24,273 $\sqrt{}$  square feet, the net lot area for proposed Lot47 (exclusive of the flag stem) exceeds the minimum lot size in the of 20,000 square feet in the R-R Zone.
- D. A building envelope must be established at the time of preliminary plat. The applicant has not included a building envelop on the preliminary plat. This information must be included on the preliminary plat prior to signature approval.
- E. Shared driveways are only permitted under certain circumstances. The proposal includes no shared driveways.
- F. Where rear yards are oriented toward driveways, an **■A•** bufferyard is required. In this case, no rear yard is oriented toward a driveway.
- G. Where front yards are oriented toward rear yards, a **■C•** bufferyard is required. In this case, the front yard is not oriented toward rear yards.

Prior to approval of a flag lot, the Planning Board must make the following findings of Section 24-138.01(f):

- A. **The design is clearly superior to what would have been achieved under conventional subdivision techniques.** The proposed flag lot yields a superior design to that which would be allowed conventionally. The flag lot creates a developable lot, surrounded on two sides with tree save area and with dramatic views, across the stormwater management pond out to the floodplain. The size of the flag lot ensure that it will have no negative impact on adjoining lots. Clearly, this is superior to a design which forfeited the flag lot.
- B. **The transportation system will function safely and efficiently.** The flag lot is at the end of a short cul-de-sac. To one side is another lot, to the other is the stormwater management facility. The flag lot will have no impact on the transportation system.
- C. **The use of flag lots will result in the creative design of a development that blends harmoniously with the site and the adjacent development.** The flag lot is in the interior of the site and will be hidden from view from adjacent development. The development will blend harmoniously with surrounding development.
- D. **The privacy of property owners has been assured in accordance with the evaluation criteria.** Given the size of the net lot, more than 24,000 square feet, the flag development of the lot with a home will in no way impair the privacy of either the homeowner of this lot or the homeowners of other lots. A substantial tree conservation area will adjoin the property to the rear and sides. The front will look out over the stormwater pond. Therefore, privacy is assured.

Given this, staff believes the use of the flag lot is appropriate for this property

4. Community Planning - The approved 1993 *Master Plan for Subregion V* recommends the property for Low Suburban Residential land use to be developed at a density of up to 2.6 dwelling units per acre. The 1993 *SMA for Subregion V* classified this property in the R-R Zone. The 1993 Master Plan map of Natural Features and Environmental Facilities indicates the site was mostly wooded in 1990; several cleared areas are shown in the central and northwestern parts of the property. A Natural Reserve area is shown along the stream located on the east side of the property; the stream and a related flood plain area are shown on the proposed site plan. Also, an existing 15 inch sewer line is shown on the 1993 plan map parallel to the stream. Proposed access is from local subdivision streets. A new collector road (C-613) is proposed between MD 5 and US 301 through the largely undeveloped area to the south of the subject property.

The proposed subdivision is designed as a collection of cul-de-sacs with access to the regional road network only via Earnshaw Drive to MD 5 or Lusby's Lane to US 301. It is a fairly long circuitous route on neighborhood subdivision streets. Moreover, according to the master plan, existing access to MD 5 at Earnshaw Drive will be closed as MD 5 is further upgraded to freeway standards and as collector road C-613 is built. The proposed alignment of C-613 is less than 1,000 feet to the south of this application. Consideration should be given to providing a stub street along the south or west side of the property to provide less circuitous access on the neighborhood street pattern to the future regional road system. The transportation planning section staff should be consulted for further evaluation.

The proposed 51 lot single-family residential subdivision conforms with master plan land use recommendations for this location.

5. Parks and Recreation - This property is subject to the mandatory park dedication requirements of Section 24-134 of the Subdivision Regulations. Because the location and size of available property make dedication inappropriate, staff recommends a fee-in-lieu of park dedication be required in accordance with Section 24-135 of the Subdivision Regulations.
6. Trails - There are no master plan trails issues associated with this application.
7. Transportation - The Transportation Planning Section has reviewed the application along with relevant traffic data, including turning movement counts provided by the applicant done in November 2000. The findings and recommendations outlined below are based upon a review of these materials and analyses conducted by the staff which are consistent with the *Guidelines for the Analysis of the Traffic Impact of Development Proposals (Guidelines.)*

In accordance with the transportation staff's past practices for subdivisions of similar size along transportation facilities similar in function to MD 5, the staff is limiting its consideration in this case to the intersection of MD 5 and Earnshaw Drive/Burch Hill Road. This intersection is currently unsignalized.

The existing conditions at the critical intersection for this application are summarized as follows: in the AM peak hour, the intersection operates with an average vehicle delay exceeding 999 seconds in both the eastbound and westbound movements, and in the PM peak hour, the intersection operates with an average vehicle delay exceeding 999 seconds in both the eastbound and westbound movements. These operating conditions are determined using the Highway

Capacity Manual. The Planning Board has determined that for unsignalized intersections on the transportation network, any intersection having an average vehicle delay exceeding 45.0 seconds in any movement is deemed to be operating unacceptably. Therefore, under existing traffic the critical intersection operates unacceptably as a signalized intersection.

A review of background development in the immediate area was conducted by staff. A growth rate of 2.5 percent per year along MD 5 was assumed. There are no improvements to this intersection which are programmed for construction in either the Prince George's County Capital Improvement Program (CIP) or the State Consolidated Transportation Program (CTP). Therefore, background traffic conditions (existing plus growth in through traffic plus traffic generated by background developments with funded improvements) are summarized as follows: in the AM peak hour, the intersection would operate with an average vehicle delay exceeding 999 seconds in both the eastbound and westbound movements, and in the PM peak hour, the intersection would operate with an average vehicle delay exceeding 999 seconds in both the eastbound and westbound movements. Given the Planning Board's criteria, under background traffic the critical intersection would continue to operate unacceptably.

This subdivision proposes 51 single family detached units for the subject property. Using the trip rates obtained from the *Guidelines*, the development of the site under the proposed subdivision would generate 8 inbound and 31 outbound trips during the AM peak hour, and 31 inbound and 16 outbound trips during the PM peak hour. Total traffic under future conditions is summarized as follows: in the AM peak hour, the intersection would operate with an average vehicle delay exceeding 999 seconds in both the eastbound and westbound movements, and in the PM peak hour, the intersection would operate with an average vehicle delay exceeding 999 seconds in both the eastbound and westbound movements. Given the Planning Board's criteria, under total traffic the critical intersection would continue to operate unacceptably.

In response to inadequacies identified at unsignalized intersections, the Planning Board has generally recommended that the applicant provide a traffic signal warrant study and install the signal if it is deemed warranted by the appropriate operating agency. The warrant study is, in itself, a more detailed study of the adequacy of the existing unsignalized intersection. The staff believes that this study is needed at the intersection of MD 5 and Earnshaw Drive/Burch Hill Road, and that the applicant should be responsible for any improvements identified as necessary by the warrant study. With such a condition, the staff believes that the critical intersection will operate acceptably in both peak hours.

The southern end of the site is traversed by the C-613 facility as designated in the *Subregion V Master Plan*. To the west of the subject property, at the location where C-613 would cross MD 5, the Master Plan shows a planned diamond interchange. In the Final Environmental Impact Statement (FEIS) for MD 5 dated June 9, 1988, the selected alternative for upgrading MD 5 includes a diamond interchange near the Master Plan location which would replace the at-grade intersections of MD 5/Earnshaw/Burch Hill and MD 5/Moores Road. Since the approval of the FEIS, the State Highway Administration (SHA) has proceeded to develop detailed designs for each recommended interchange, and then fund and construct each one.

In consideration that C-613 will at some point become the preferred (if not the sole) means of accessing MD 5, the staff suggested that the C-613 right-of-way through the subject property be dedicated, and that the street pattern within the subdivision be slightly refined to more directly

interface with C-613. To that end, the transportation staff would make the following recommendations:

- a. The C-613 collector facility is shown correctly on the plan, but the disposition of that right-of-way is not clear, and two proposed lots are shown over the right-of-way. This right of way should be dedicated, and those two lots lost.
- b. Lusby Court should be realigned to intersect the C-613 right-of-way at a right angle or something approaching a right angle. It should not end in a cul-de-sac.
- c. Elmwood Drive may need to be slightly realigned on the plan as well, so that it can intersect Lusby Court at a right angle or something approaching a right angle.

Staff notes that if the plan is left as submitted, the Elmwood Drive/Lusby Court cul-de-sac would be in excess of 3,000 feet in length. This length is far in excess of good community design practices. Long cul-de-sacs such as this hamper the delivery of public services, and they encourage speeding by residents. Not providing for this future connection would lengthen future fire response times into this community from fire stations to the north and south along C-613 and A-65 (which is the continuation of C-613 on the west side of MD 5), and make access to nearby proposed schools and a proposed village activity center more inconvenient.

Based on the preceding findings, the Transportation Planning Section concludes that adequate transportation facilities would exist to serve the proposed subdivision as required under Section 24-124 of the Prince George's County Code if the application is approved with the transportation related conditions included in this report.

8. Schools - At present, the Planning Board is reviewing the *Draft Regulations to Analyze the Development Impact on Public School Facilities* January 2001, and *Enrollment Projections for the School APF Test*. The Planning Board is expected to take final action on projections and regulations on Thursday, January 4, 2001. This report will be released prior to the Planning Board action on the projections and regulations. Once the Planning Board has adopted the regulations staff will make the appropriate findings. The additional findings and associated conditions shall be incorporated into the preliminary plan resolution prior to adoption by the Planning Board.
9. Fire and Rescue - The Growth Policy and Public Facilities Planning Section has reviewed the subdivision plans for adequacy of public facilities.
  - a. The existing fire engine service at Brandywine Fire Station, Company 40 located at 14201 Brandywine Road has a service response time of 6.25 minutes, which is beyond the 5.25 minutes response time guideline.
  - b. The existing ambulance service at Brandywine Fire Station, Company 40, has a service response time of 6.25 minutes, which is within the 6.25 minutes response time guideline for Lots 1 and 51, the two lots at the site's entrance. All other lots are beyond the response time guideline.



- c. The existing paramedic service at Brandywine Fire Station, Company 40, has a service response time of 6.96 minutes, which is within the 7.25 minutes response time guideline.

To alleviate the negative impact on fire and rescue services due to the inadequate service discussed above, the Fire Department recommends that all residential structures be fully sprinkled in accordance with National Fire Protection Association Standard 13D and all applicable Prince George's County Laws. New residential structures are required, as a matter of Prince George's County law, to be equipped with an automatic fire suppression system. Therefore, no condition is necessary. These findings are in conformance with the *Adopted and Approved Public Safety Master Plan 1990* and the *Guidelines for the Analysis of Development Impact on Fire and Rescue Facilities*.

10. Police Facilities - The proposed development is within the service area for District V- Clinton. In accordance with Section 24-122.1(c)(1)(A) and (B) of the Subdivision Regulations of Prince George's County, the existing county police facilities will be adequate to serve the proposed Earnshaw Property development. This police facility will adequately serve the population generated by the proposed subdivision.
11. Health Department - The Health Department reviewed the application and offered no comments.
12. Stormwater Management - The Department of Environmental Resources (DER), Development Services Division, has determined that on-site stormwater management is required. A Stormwater Management Concept Plan, # 8324903-2000-00, has been approved with conditions to ensure that development of this site does not result in on-site or downstream flooding. Development must be in accordance with this approved plan.
13. Public Utility Easement - The required 10-foot wide public utility easement is shown on the preliminary plat, but not identified. The easement will be included on the final plat.

## RECOMMENDATION

APPROVAL, subject to the following conditions:

1. Development of this subdivision shall be in compliance with the approved Type I Tree Conservation Plan (TCP I/41/00). The following note shall be placed on the Final Plat of Subdivision:

"Development is subject to restrictions shown on the approved Type I Tree Conservation Plan (TCP I/41/00), or as modified by the Type II Tree Conservation Plan, and precludes any disturbance or installation of any structure within specific areas. Failure to comply will mean a violation of an approved Tree Conservation Plan and will make the owner subject to mitigation under the Woodland Conservation/Tree Preservation Policy."
2. Prior to the issuance of permits, a Type II Tree Conservation Plan shall be approved.
3. The Type II Tree Conservation Plan shall address the following issues:

- a. All on-site reforestation and afforestation shall be accomplished with planting stock no less than one inch caliper.
  - b. An edge management plan shall be included as part of the TCP II. The edge management plan shall provide specific information to prospective homeowners on how the woodlands on their lots may be used, what vegetation management activities if any may be done and how those activities may be accomplished.
  - c. The edge management plan shall be incorporated by the applicant into a pamphlet that can be provided to prospective homeowners.
  - d. All on lot reforestation and afforestation shall be completed prior to the issuance of the first use and occupancy permit. If the project is to be phased the TCP II shall clearly identify the phasing and the timing of the reforestation and afforestation.
4. Prior to the issuance of any grading permits which impact the stream, wetlands, 100-year floodplain or the associated buffers to these features the applicant, his heirs, successors and/or assigns, shall provide the Environmental Planning Section with copies of the appropriate federal and/or state permits authorizing the disturbance to these features.
5. At the time of final plat approval, the applicant, his heirs, successors and/or assigns, shall dedicate right-of-way along the proposed C-613 facility as shown on the submitted preliminary plan. Improvements within the dedicated right-of-way shall be determined by DPW&T.
6. Prior to the approval of the initial building permit within the subject property, the applicant, his heirs, successors and/or assigns, shall submit an acceptable traffic signal warrant study to the State Highway Administration (SHA) and, if necessary, the Department of Public Works and Transportation (DPW&T) for the intersection of MD 5 and Earnshaw Drive/Burch Hill Road (this study requirement may be waived if the SHA indicates, in writing, that a recent study is available for them to determine signal warrants). The applicant should utilize a new 12-hour count, and should analyze signal warrants under total future traffic as well as existing traffic. If deemed warranted by SHA and/or DPW&T, the applicant shall bond the signal prior to the release of the initial building permit, and install the signal if directed by the operating agency.
7. Prior to signature approval, the preliminary plat shall be revised as follows:
  - a. Lusby Court shall be realigned to intersect the C-613 right-of-way at a right angle, or an angle acceptable to the Transportation Planning Section. It should not end in a cul-de-sac. This will result in the loss of lots 19 and 20.
  - b. Elmwood Drive shall be realigned, as necessary, on the plan as well, so that it can intersect Lusby Court at a right angle, or an angle acceptable to the Transportation Planning Section.
  - c. The required 10-foot wide Public Utility Easement shall be identified.

STAFF RECOMMENDS APPROVAL OF TYPE I TREE CONSERVATION PLAN TCP I/41/00. STAFF RECOMMENDS APPROVAL OF THE VARIATION REQUEST TO SECTION 24-130 OF THE SUBDIVISION REGULATIONS.